Vector Map (VMAP)

US Army Corps of Engineers®
Engineer Research and Development Center

Description and Background

The National Geospatial-Intelligence Agency (NGA) Vector Map (VMAP) product is a collection of data bases that provide vector-based geospatial data at low-, medium-, or high-resolution. These data are separated into nine thematic layers and are topologically structured. This product is designed to support Geographical Information System (GIS) analysis and can be used for various situation /map background displays. Possible Army applications using VMAP exist in the modeling and simulation community.

Key Capabilities

Content: VMAP is produced at several scales and organized in thematic layers.

Scales: VMAP Level 0 contains the low-resolution feature and attribute content of Operational Navigation Charts (ONCs). It is an updated and improved version of NGA's Digital Chart of the World (DCW). VMAP Level 1 contains the feature and attribute content similar to 1:250,000-scale Joint Operations Graphics (JOGs). VMAP Level 2 contains the feature and attribute content similar to 1:50,000 and/or 1:100,000-scale Topographic Line Maps (TLMs). Urban Vector Map (UVMAP) contains the high-resolution feature and attribute content of City Graphics.

Thematic Layers: VMAP is organized into nine thematic layers: boundaries, elevation, hydrography, industry, physiography, population, transportation, utilities and vegetation. A data quality index is also provided. Each thematic layer is stored as a single coverage and contains a set of files that describe the features in each thematic layer.

Structure and Format: Attribution conforms to the Feature Attribute Coding Catalog (FACC). VMAP is Vector Product Format (VPF- and National Imagery Transmission Format Standard (NITFS)-compliant. Coordinate Reference System: Geographic coordinates are stored in decimal degrees with southern and western hemispheres using a negative latitude and longitude. The GEOREF coordinate system is used for the geographic location of tiles.

Datums: The horizontal datum is World Geodetic System 1984 (WGS 1984). The vertical datum is Mean Sea Level.

Media: VMAP is distributed on CD-ROM, implementing the ISO 9660 volume and file standard.

Standard File Size: The file size varies with feature content.

Accuracy: VMAP is primarily cartographically derived and the accuracy will be in accordance to the associated product.

Current Status   Worldwide coverage (where map products currently exist) is planned for VMAP Levels 0 and 1. VMAP Level 2 and UVMAP will be produced as dictated by requirements.

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